AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An automatic method for decision-making by a virtual or physical agent according to

external variables coming from an environment described by a numerical model stored in memory means of the agent or by physical sensors connected to said agent, ~~and~~

variables internal to the agent described by numerical parameters stored in the memory means of the agent, and

processing means of the agent called decision-making means controlling ~~the actions~~ actuators of said agent, characterised in that said decision-making means determines the parameters of at least one action of said agent, according to at least some of the internal or external variables, ~~said~~ the operation of determining the parameters of an action being carried out by subprocessing means, called interest centre, which performs several decision subprocesses, ~~which are~~ each subprocess consisting in calling a processing block which performs a function of at least some of said external and internal variables, and each actuator dealing with a limited part of the general decision problems, the parameters determined by each of said subprocesses being processed in order to construct the set of action parameters controlling said agent.

2. (original) An automatic method according to Claim 1, characterised in that some internal variables are numerical values representing perception.

3. (original) An automatic method according to Claim 1, characterised in that some internal variables are numerical values representing motivation.

4. (original) An automatic method according to Claim 1, characterised in that some external variables are numerical values representing opportunity.

5. (original) An automatic method according to Claim 1, characterised in that calculation of the parameters, motivations and opportunities is performed by a tree of processing blocks, each processing block corresponding to a function receiving input variables comprising some of the internal variables, and external variables and output variables of one or more upstream processing blocks.

6. (original) An automatic method according to Claim 5, characterised in that said processing blocks comprise logical operators, expert systems and mathematical operators.

7. (original) An automatic method according to Claim 1, characterised in that it comprises a means of interrupting said parameter-determining operation consisting of controlling the action of the agent with the parameters determined using the subprocesses processed before the interruption.

8. (original) An automatic method according to Claim 7, characterised in that activation of the interruption means is controlled according to the state of a processing counter decremented by the cost of each processing block used.

9. (original) An automatic method according to Claim 8, characterised in that the cost of a processing block is determined by a numerical parameter representing the machine time necessary for executing the processing of said block.

10. (original) An automatic method according to Claim 9, characterised in that said numerical parameter representing the machine time is determined relatively with respect to the costs of at least some of the other blocks.

11. (original) An automatic method according to Claim 7, characterised in that said interruption means is controlled by a function of the master system.

12. (original) An automatic method according to Claim 7, characterised in that it comprises steps for interrogating the master system after each determination of a parameter set for an action, and for activating said interruption means according to the response of the master system to this interrogation.

13. (original) An automatic method according to Claim 7, characterised in that it comprises means of arranging the subprocesses in decreasing order of activation.

14. (original) An automatic method according to Claim 7, characterised in that it comprises means of recording the state of the calculation trees, actuators and subprocesses at the time of the interruption, and means for continuing the decision process using the recorded information.

15. (original) An automatic method according to Claim 1, characterised in that several agents are controlled from a common decision model, said decision model comprising a means of recording the information specific to each agent.

16. (original) An automatic method according to Claim 1, characterised in that it does not comprise steps for dynamic memory allocation during the processing of the decision model.

17. (original) An automatic method according to Claim 1, characterised in that it comprises means of processing logical dependencies between the subprocesses.

18. (original) An automatic method according to Claim 17, characterised in that said means of processing logical dependencies consists of modifying the activation of the master subprocess or subprocesses according to the highest activation of the dependent subprocesses.

19. (original) An automatic method according to Claim 1, characterised in that it carries out the processing of multi-valued external variables originating from different perceived objects of the environment.

20. (original) An automatic method according to Claim 5, characterised in that the output values of a processing block are memorised during the processing cycle if they are used by another subprocess.

21. (original) An automatic method according to Claim 20, characterised in that said output values are recorded in a memory common to several processing blocks.

22. (original) An automatic method according to Claim 21, characterised in that it comprises a means of recalculating one or more outputs of a processing block where the common memory is saturated.

23. (original) An automatic method according to Claim 1, characterised in that it comprises a means of implementing a behavioural detail level.

24. (original) An automatic method according to Claim 1, characterised in that it comprises a convergent adaptation mechanism irrespective of the nature of the learning signal.

25. (original) An automatic method according to Claim 24, characterised in that learning is carried out by a stochastic process based on the FISK distribution.

26. (original) An automatic method according to Claim 1, characterised in that it comprises means of grouping and recording memories consisting of information corresponding to perceptions or to calculation tree results.

27. (original) An automatic method according to Claim 26, characterised in that it comprises a step of grouping memories in the form of strata.

28. (original) An automatic method according to Claim 26, characterised in that it comprises a recognition step consisting of selecting the active memories.

29. (original) An automatic method according to Claim 28, characterised in that it comprises an operation of creating a new memory in the case of absence of perfect recognition.

30. (original) An automatic method according to Claim 28, characterised in that it comprises an operation of updating the active memories by replacing the memorised information by the state of the calculated information.

31. (original) An automatic method according to Claim 30, characterised in that it comprises an operation of calculating the reliability of the information of the updated memories.

32. (original) An automatic method according to Claim 27, characterised in that it comprises means of connection between the memories and the actuators of the stratum.

33. (original) An automatic method according to Claim 32, characterised in that the connection is performed by virtue of generic calculation trees, common to all the memories and using the information of the memory.

34. (original) An automatic method according to Claim 26, characterised in that it comprises means of linking between the memories for the creation of influences between the memories.

35. (original) An automatic method according to Claim 34, characterised in that it comprises a step of propagating influences between the memories by means of links.

36. (original) An automatic method according to Claim 35, characterised in that it comprises optimisation of updates of influences limited to the influences which have undergone a change.

37. (original) An automatic method according to Claim 35, characterised in that it comprises a step of transmitting modified information to the rest of the decision model.

38. (original) An automatic method according to Claim 37, characterised in that it comprises a means of transmitting modified information by the creation of a virtual object.

39. (original) An automatic method according to Claim 37, characterised in that it comprises a means of transmitting modified information by overloading the result of a processing block.

40. (original) An automatic method according to Claim 26, characterised in that it comprises a mechanism for automatic management of the number of memories used consisting of deleting the least useful memory.

41. (original) An automatic method according to Claim 40, characterised in that said mechanism for automatic management of the number of memories can be customised at the design stage.

42. (original) An automatic method according to Claim 35, characterised in that it comprises a mechanism for automatic management of the number of links used consisting of deleting the least useful link.